IndustryWeek

TOP TIPS

# A Sensible Guide to Selling an Industrial IoT Project

**The marketing hype surrounding the industrial Internet of Things (IoT) has done one thing extremely well:** It's convinced untold numbers of executives that their companies better get cracking on deploying industrial IoT for fear of falling behind the competition. Unfortunately, it's also caused unnecessary angst, when in fact there are very real benefits to be had from industrial IoT and factories are arguably one of the environments most likely to benefit. For those who have the task of presenting these benefits to management, these tips will help you deliver an accurate message and build a powerful case for investment.

## 1. Keep it simple.

Although the industrial IoT is immensely complex, your presentation should not be so. That's because corporate executives won't be selecting sensors, unraveling the mess caused by having too many communications options, learning about artificial intelligence, and hundreds of other things. He or she needs to know the basic elements of industrial IoT, how it works in basic terms, what problems it solves, what it's benefits are, and what the cost is likely to be.

## 2. Learn, then learn some more.

You cannot expect to convince someone else about industrial IoT unless you're as conversant as possible with the topic. Achieving this will take a lot of time spent on the Internet and talking to others, learning enough to sort fact from fiction and keeping what's relevant. However, it will be time well spent because when you're done, you'll have a solid basis from which to build your case. You may only be at approximately industrial IoT 101 at this point, but you'll probably know enough to answer any questions likely to be asked during your initial presentation.

## 3. Read this basic overview of industrial IoT before you start the Googling process.

Industrial IoT connects the machines, subsystems, and systems in the plant so they can share data generated by the internal or external sensors connected to them. These sensors measure temperature, vibration, noise, power (voltage and current), and other things, depending on the type of equipment. The resulting data then goes to an "edge gateway," where the data is aggregated and some processing is performed. From there, a reduced data set is transferred to a cloud-based data center where massive computational power and artificial intelligence are used to analyze the data, producing "human-intelligible" information from which decisions can be made.

A growing trend is to place a lesser amount of the processing and analytical capability currently found in the cloud to the edge where the data is generated. Edge processing allows more intelligence and a more manageable amount of data to be sent to the cloud, while also reducing latency, which is essential for some functions in the plant. That, in a nutshell, is the massively-abbreviated definition of industrial IoT.

## 4. Focus on the following topics in your research.

**Sensors:** These are the "edge devices" that generate the data and are the fundamental enablers of industrial IoT. Measurements include voltage and current, noise, vibration, temperature, and other metrics depending on their relevance to the types of equipment in your factory.

**Communications:** There are two types, local and long range. The protocols for short range form a mesh network that allows the wireless-enabled sensors to communicate among themselves and to the gateway. The longer-range options include cellular networks via narrowband IoT and Low-Power Wireless Area Networks (LPWANs). Their job is to take the data to the cloud.

**Edge computing, fog computing, machine learning, and artificial intelligence:** These concepts and technologies play a major role in bringing intelligence to the edge, and they're very complex, but it's necessary to understand how they serve industrial IoT and in a basic sense how they work.

**Upgrading legacy equipment:** Old machines and other types of equipment may not be "connectable" in the industrial IoT sense of the term, but they need to be, so learn about how this can be done.

**Security:** A complex issue and critical for your deployment. Learn about security at every point in the system. You will be asked about it, probably often.

**The work:** In simple terms without dozens of PowerPoint slides, show the major steps required in the process. Provide only as much detail as required to demonstrate that you know what needs to be done.

**The team:** Implementing an industrial IoT project requires buy-in not just from the top, but also from the people who will be instrumental in ensuring optimum results. There is a lot of useful high-level information about this on the Web.

**Vendors:** You'll need at least one, and probably others. Your initial business case isn't the time to choose them, but rather to point out that they will be needed and for what, which is to augment your knowledge and that of the others on your team.

## 5. Most important: Start small.

When viewed from on high, industrial IoT looks like a massive endeavor that, while promising an exceptional return on investment, greater plant efficiency and more, seems like one huge, incomprehensible, expensive task. And it is, but that's only completely true when everything is tackled at once, so the best approach by far is to start small. That is, implement industrial IoT on a key part of a facility rather than all of it, which makes the tasks at hand manageable, lets you demonstrate results quickly, and shows that industrial IoT can be realized. It also makes your plans much easier to articulate with confidence.

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